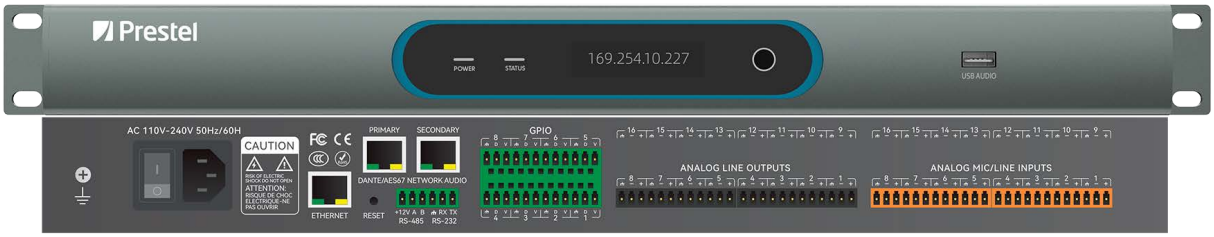
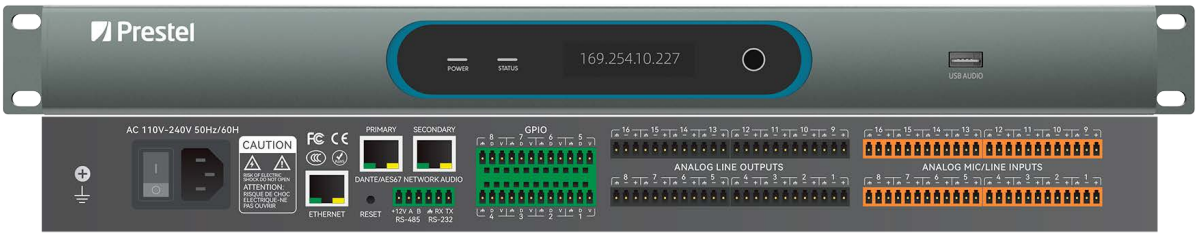
Prestel DSP-0808/DSP-0808H /DSP-1616/DSP-1616H

Open architecture Dante
DSP audio processor





USER MANUAL

CONTENTS

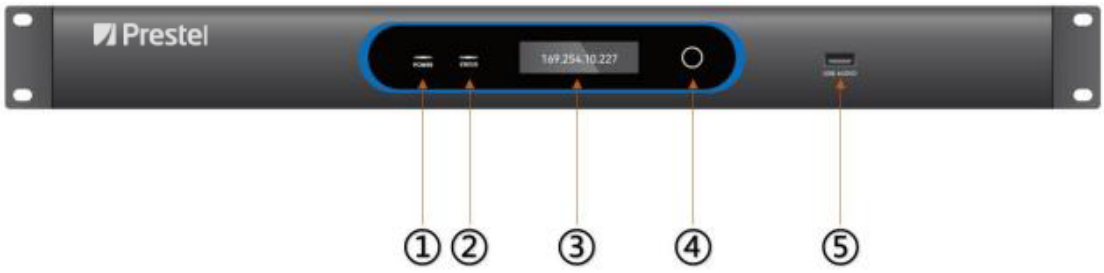
1 Overview

This software is an audio system control software, primarily used for software configuration and processor programming and control of StanFlex series. Its interface is simple and intuitive, enabling users to easily set and access various parameters and configurations. The graphical control interface is one of the system's core features, allowing users to control it through software installed on their computer with real-time visual feedback. Additionally, the software supports wireless touchscreen control, offering a more convenient wireless control method.

When using this software, users can configure and manage various parameters and settings across the entire audio system with simple mouse operations. The user interface is intuitive and straightforward, making it easy for users to get started. Additionally, this manual provides detailed operation guides to help users better understand the software's functions and uses, thereby enhancing user satisfaction and experience.

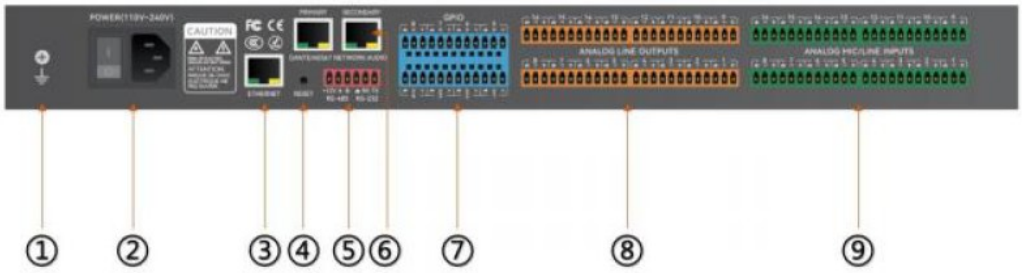
2 Panel and Interface Introduction

2.1 Front Panel



1. **Power:** LED power indicator light.
2. **Status:** Equipment operating status indicator light.
3. **OLED display:** The display content includes: device name, project name, IP address, subnet mask, default gateway, firmware information, temperature, fan speed; Input and output channel status: mute, signal indication, +48V phantom power supply.
4. **Touch button:** Turn pages on the display screen.
5. **USB audio:** USB sound card, which can realize recording function.

2.2 Rear Panel



1. **Grounding screw:** It can prevent static electricity or leakage on the surface of electrical equipment from causing shock injuries to people.
2. **POWER interface:** Connect to 110V-240V AC power supply, and the rocker switch controls the processor power supply.
3. **ETHERNET:** Network control interface, by connecting to this network port, the client computer can debug and monitor the device.
4. **RESET:** Press and hold for 3 seconds to restore factory settings.
5. **RS232+RS485:** Connect to control terminal or central control equipment.
6. **Dante Network interface:** Used to connect to the Dante audio network, with the main port on the left and the backup port on the right **(the two ports cannot be plugged in at the same time)**.
7. **GPIO:** 8 channels of definable input/output logic level control ports, which can be connected to trigger device actions below 24V, such as dry contact signals, or output 5V after triggering actions to drive relays and other devices.
8. **OUTPUT:** Can be connected to power amplifiers, active speakers, and other equipment.
9. **INPUT:** Can connect microphones, DVDs, and other devices.

3 Operating Requirements

3.1 Hardware Requirements

Processor: Intel Pentium Celeron dual-core J1800 and above

Memory: 4G

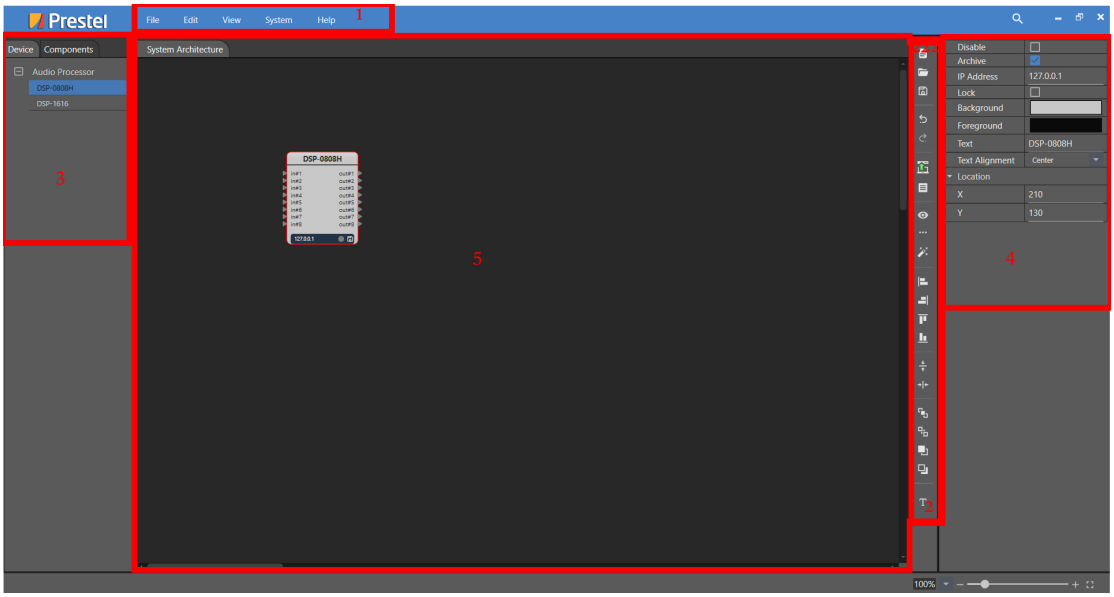
Storage: 64G

3.2 Software Requirements

Operating system: Windows 7, Windows 10

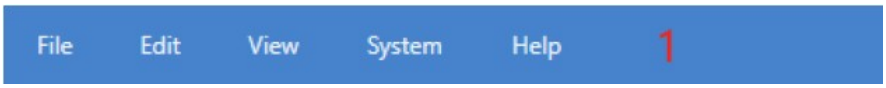
Environment support: NET Framework 4.5.1 and above

4 Software Interface Introduction



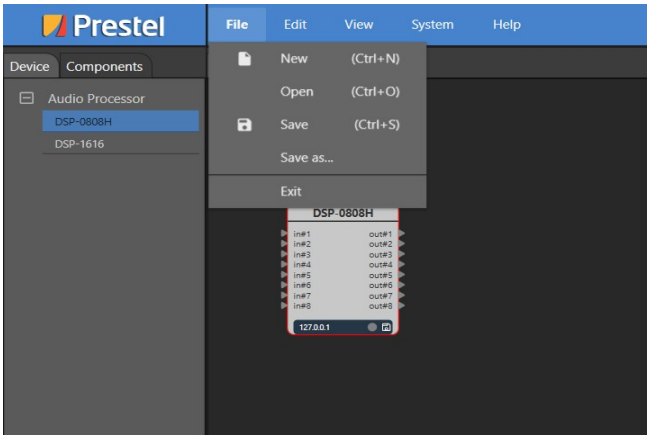
The software is divided into five areas, 1 corresponds to the menu bar, 2 is the tool bar, 3 is the device bar, 4 is the property bar, and 5 is the editing area.

4.1 Menu Bar



5 options in the menu bar, corresponding to File, Edit, View, System and Help.

4.1.1. File



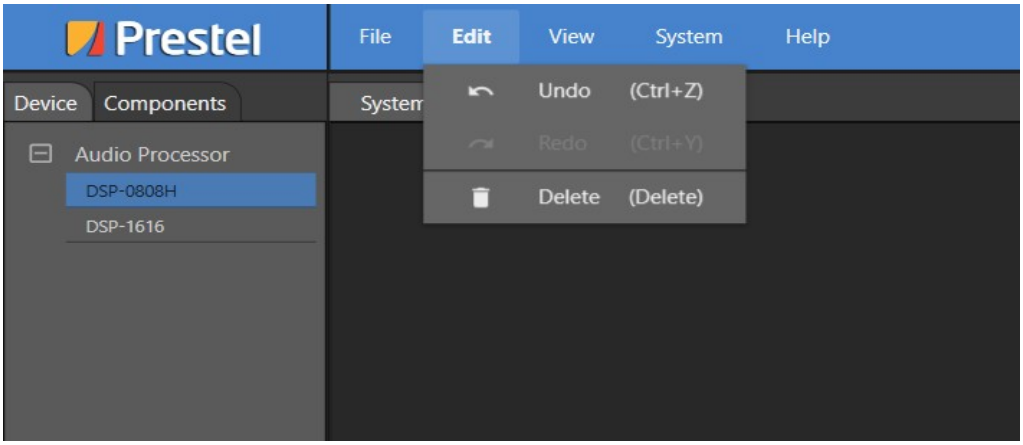
New: Click to create a new project.

Open: Click to select an item from the path to open.

Save: Click to save the project to the default path.

Save as: Click to save the project to the specified path.

4.1.2. Edit

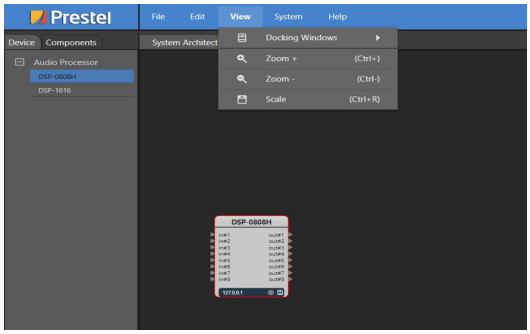


Undo: Recall the previous action, shortcut key "Ctrl +Z".

Redo: Restore the previous operation, shortcut key "Ctrl +Y".

Delete: Delete a component or segment, shortcut key "Delete".

4.1.3. View

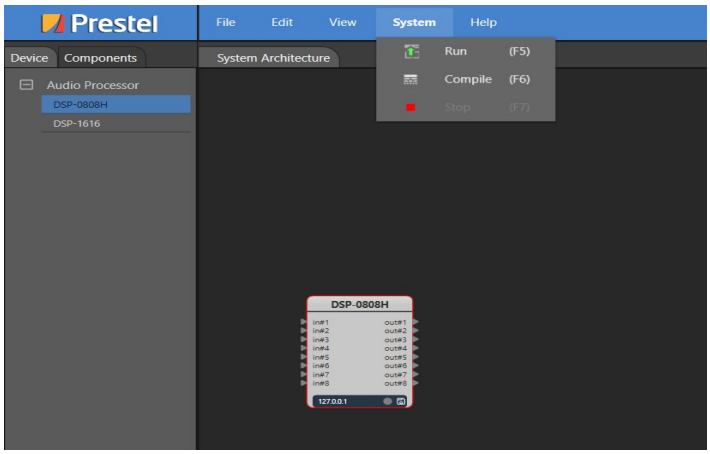


Zoom In: Enlarge the viewport of the editing area (maximum 400%). Shortcut key: "Ctrl +" or hold down "Ctrl + mouse wheel" to zoom in.

Zoom Out: Reduce the viewport of the editing area (minimum 50%). Shortcut key: "Ctrl -" or hold down "Ctrl + mouse wheel" to zoom out.

Scale Proportionally: Restore the viewport scale to 100%. Shortcut key: "Ctrl + R".

4.1.4. System

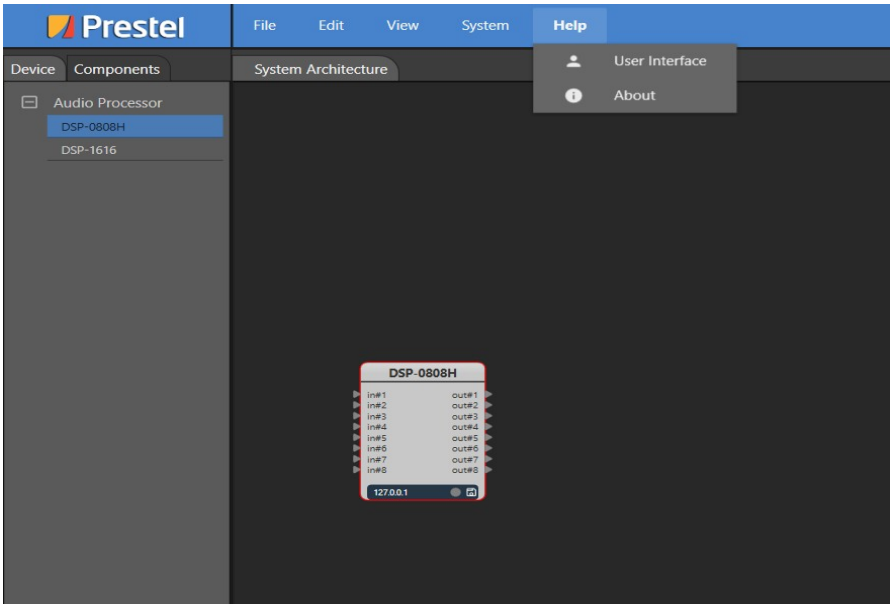


Upload and Run: Upload and run the program. Shortcut key: "F5".

Compile: Compile the program. Shortcut key: "F6".

Stop: Stop the running program. Shortcut key: "F7".

4.1.5. Help



User Interface: The interface where central control programming can be performed.

About: Displays software information and version.

4.2 Tool Bar

New: Click to create a new project and you will be prompted whether unsaved projects need to be saved.

 **Open:** Click to select an item from the path to open.

 **Save:** Click to save the project to the default path.

 **Cancel:** Click to redo the module.

 **Redo:** Click to cancel the module.

 **Upload and run:** Upload and run the program, shortcut key “F5”.

 **Compile:** Compile the program, shortcut key “F6”.

 **Aerial view:** Display a bird's-eye view on the interface.

 **Signal path:** After turning it on, selecting any path in any area will display the related paths from the beginning to the end of this path.

 **Auto connect:** Select the module and click here to connect automatically.

 **Align left**

 **Align right**

 **Top alignment**

 **Bottom alignment**

 **Vertical adjacent arrangement**

 **Horizontal adjacent arrangement**

 **Upper layer**

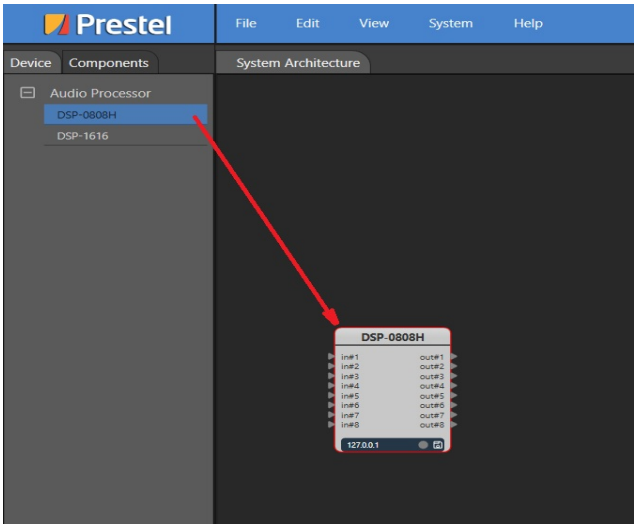
 **Next layer**

 **Uppermost layer**

 **Bottom layer**

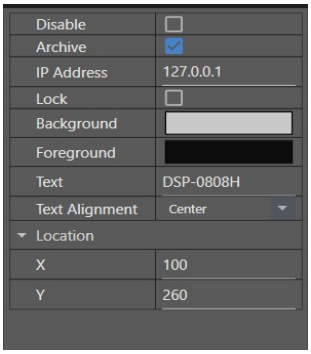
 **Text**

4.3 Device Column



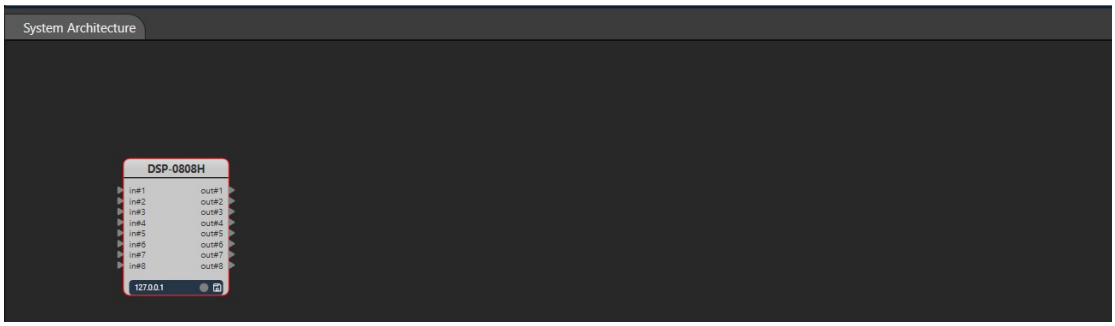
All options in the device column include all models supported by the software. When connecting a device, you need to drag the corresponding model to the editing area.

4.4 Property Bar



After selecting a different module, you can edit the parameters for that module in the properties bar.

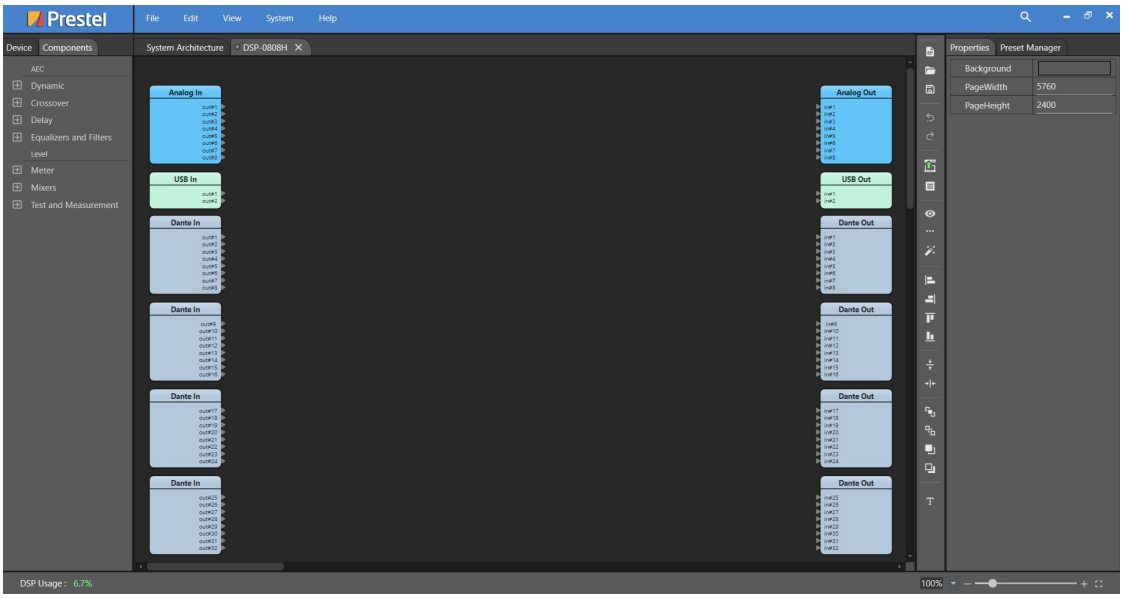
4.5 Editing



The editing area is where the debugging connections of all modules are made.

4.6 Other Interfaces

The interface after double-clicking to access the device.



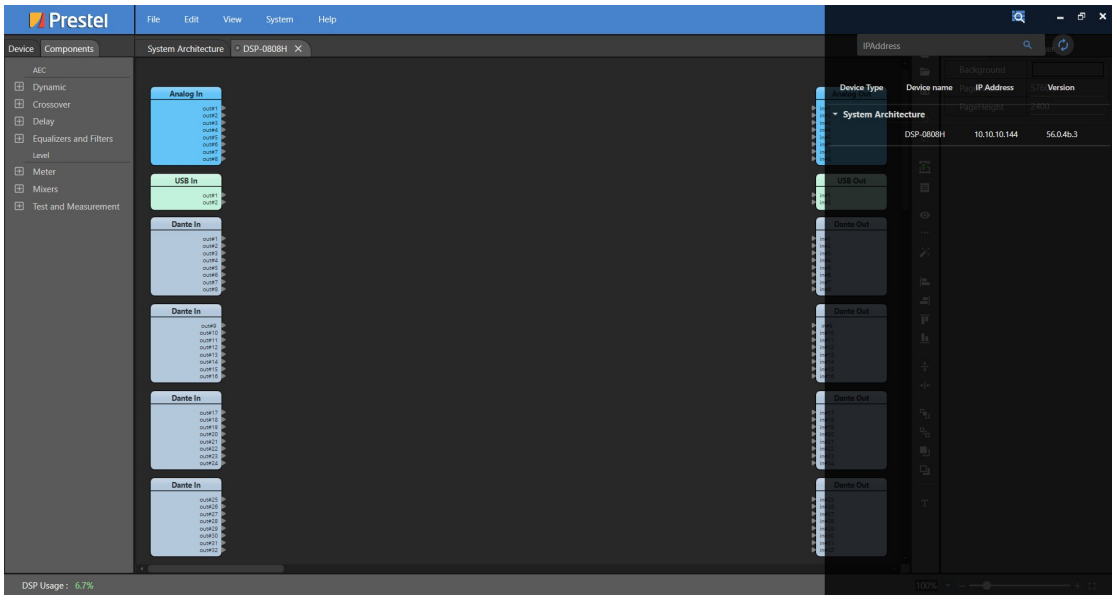
1. Default management area, including adding, calling and deleting preset positions

2. Aerial view area, showing a bird's eye view of the entire editing area module.

5 Software Usage Introduction

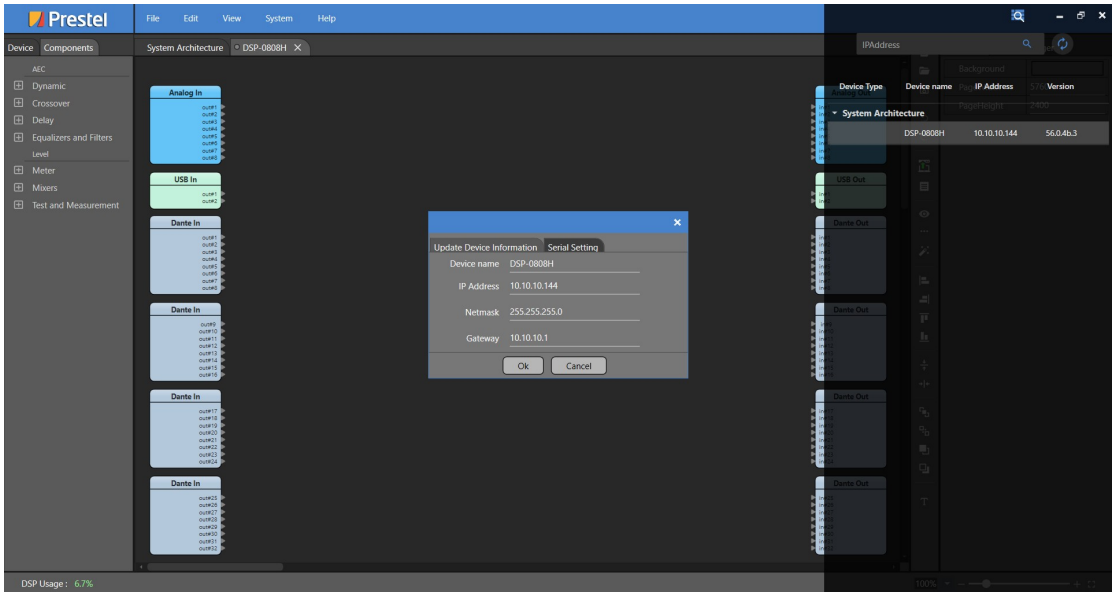
5.1 Discover devices

In the upper right corner of the main interface of the software, click the device search button (the small magnifying glass icon). All devices that can be recognized on the network will pop up on the right side of the interface. The device discovery list displays the device type, device name, IP address, and firmware version.



5.2 Modify IP

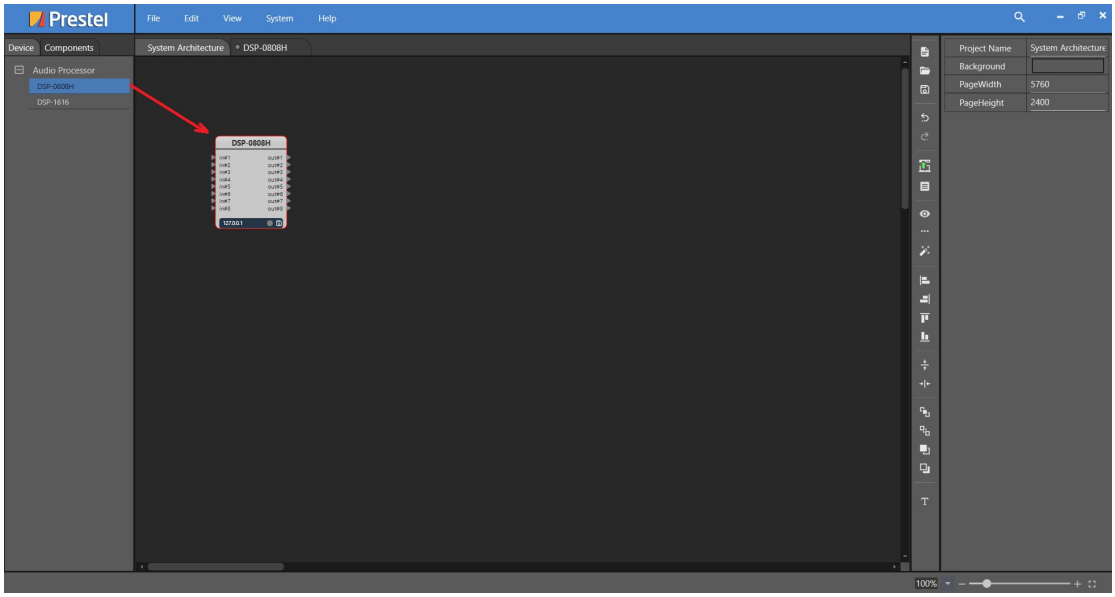
Double-click a device in the device list. In the pop-up dialog box, you can modify the basic information of the device, modify the IP and serial port settings, as shown in the following figure:



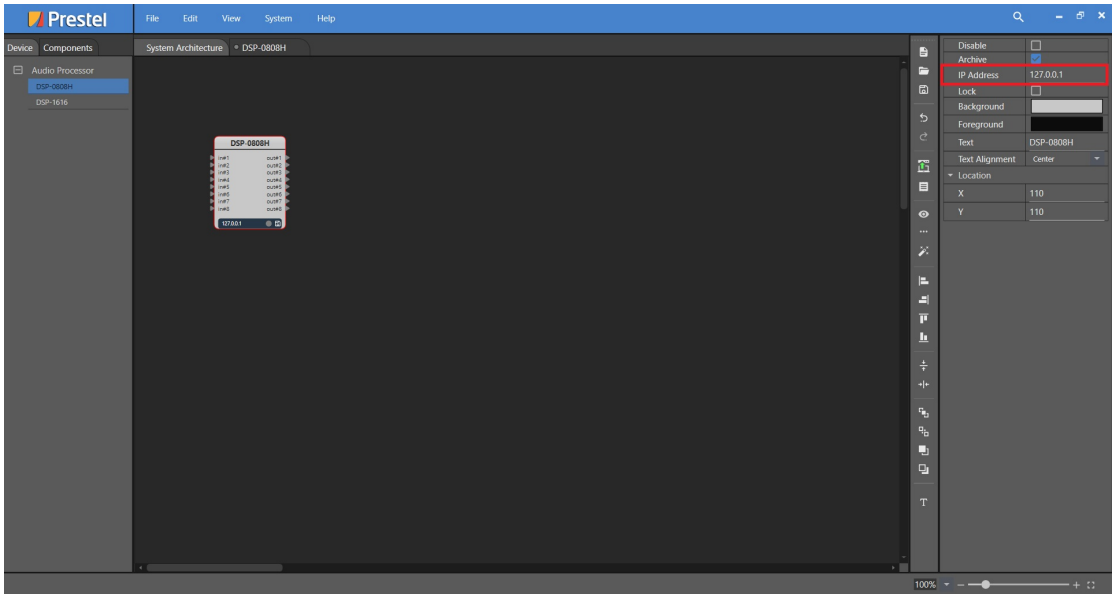
Note: As long as the device is on the unified LAN, users can find it through the device discovery bar, even if it is not in the same subnet. However, to download and upload programs to the device, the operating computer must be in the same subnet as the device.

5.3 Create new device

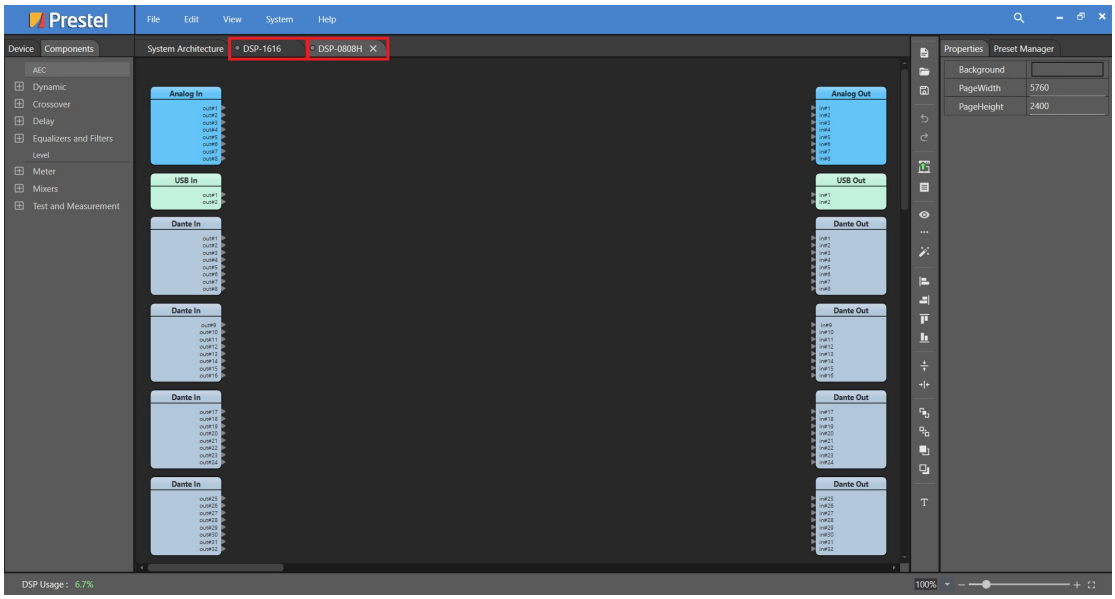
In the system architecture interface, the user selects the target device from the device bar on the left side of the software's main interface, holds down the left mouse button, and drags it to the central main form of the software, as shown in the following figure:



Click to select the created device module. The attribute configuration of the created device module will be displayed in the attribute configuration area on the right side of the form. The following attributes can be configured:



IP address: The IP corresponding to the device hardware (the target device IP in the device discovery list). Note: Incorrect configuration of this item will cause the program to fail to upload to the processor properly.



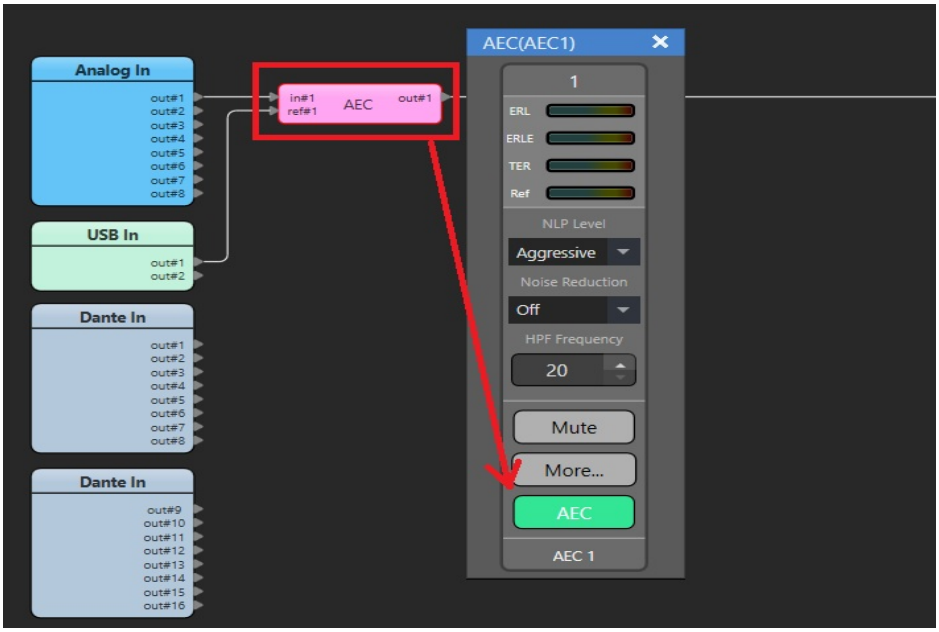
Text: Display name of the device module.

The software supports the design and management of programs for multiple devices under the same program. To edit or control each device, you only need to double-click the device module or stand-alone device name to enter the programming page of the device.

5.4 Detailed programming steps

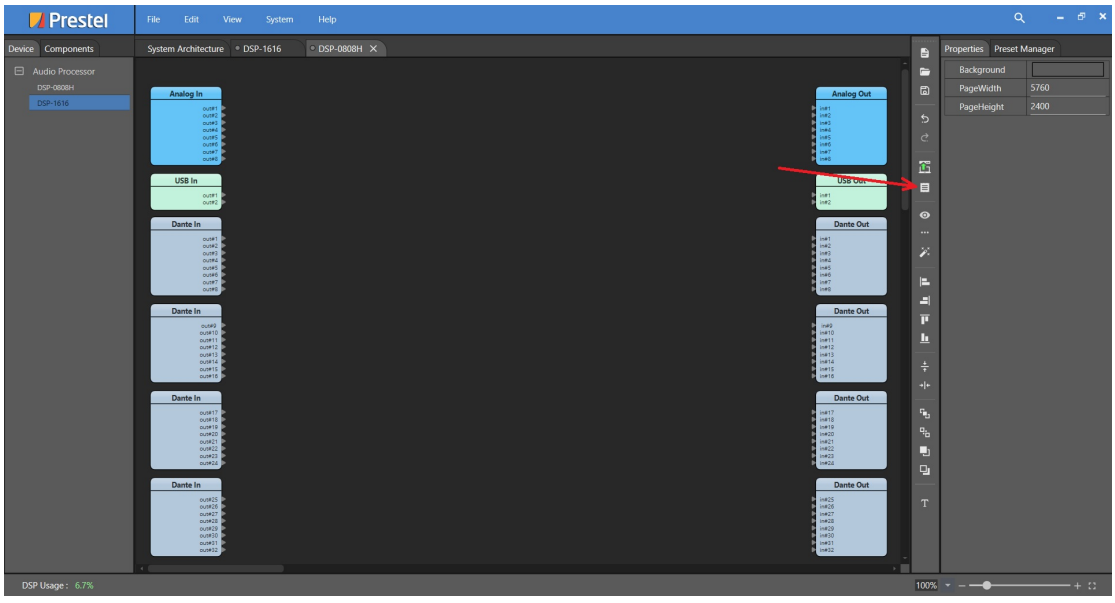
5.4.1 Module application

There are a variety of DSP control processing modules in the software. After the user double-clicks to enter the device module page, they can open the module parameters on both computers for debugging according to their needs and the actual situation of the system. These parameters include level control, level display, high and low pass filters, parametric equalizer, feedback suppressor, delay processing, routing distribution, matrix mixing, and more. As shown below:



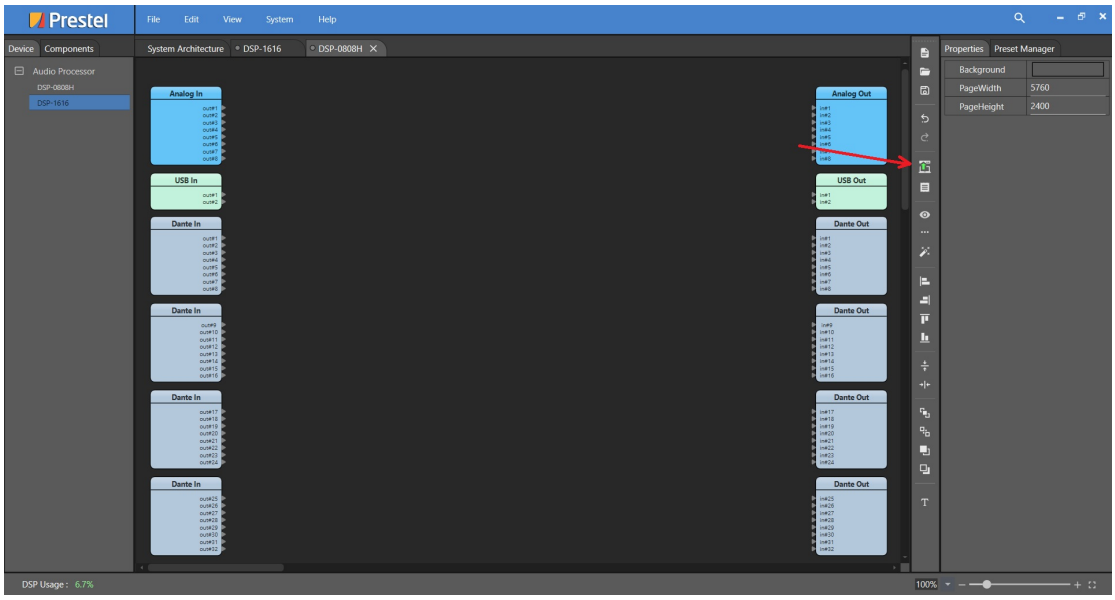
5.4.2 Simulation run

After completing the program design, the user can compile and simulate it locally. Click the compile button in the toolbar (as shown in the figure below) or press "F6" on the keyboard. After running the simulation, the user can configure and change the program parameters locally.

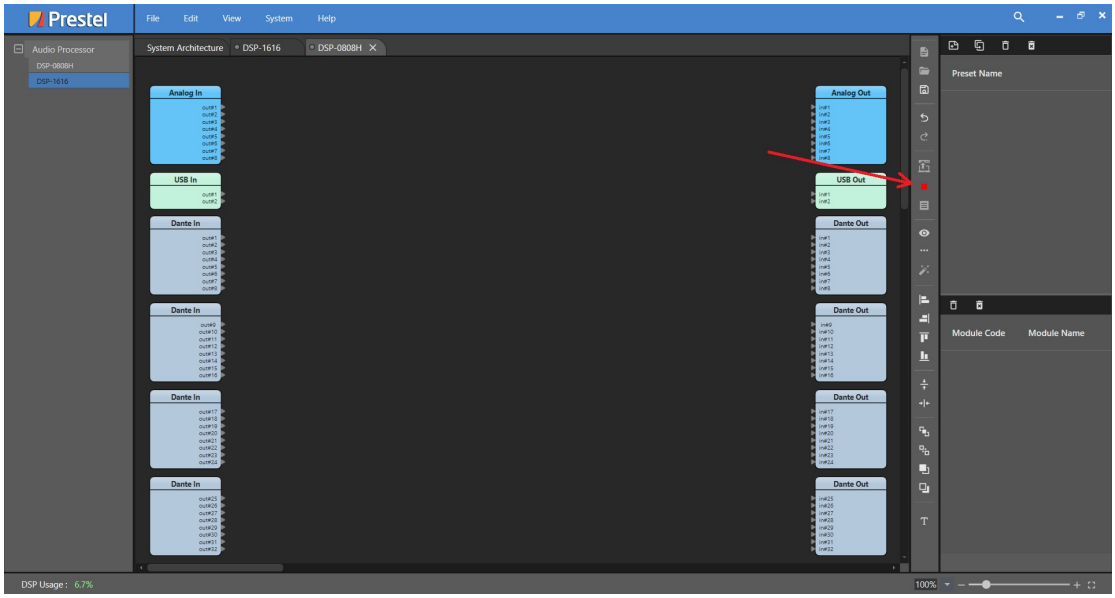


5.4.3 Upload and run program/stop program

After completing the program design and editing of the device, it needs to be uploaded to the processor to take effect. Click the upload icon in the software toolbar (as shown in the figure below) or press the F5 key on the keyboard.



After successfully uploading the program, the toolbar of the software interface will switch from "editing mode" to "running mode". During this time, most modules cannot be edited, and you will need to press F7 or the stop button to resume editing.

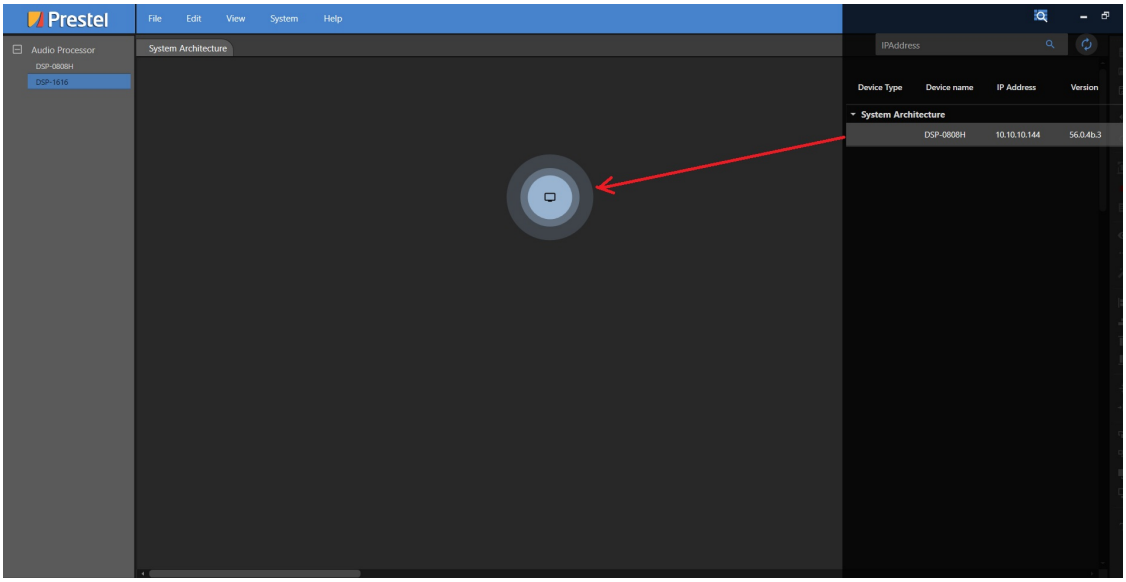


Note: When creating a program, the "DSP occupancy rate" at the bottom left of the software window must not exceed 100%. If it does, the software and the corresponding equipment will not operate normally.

Note: The IP address of the uploaded program must match the hardware device configuration. If the configuration is inconsistent, the upload will fail and a dialog box will pop up.

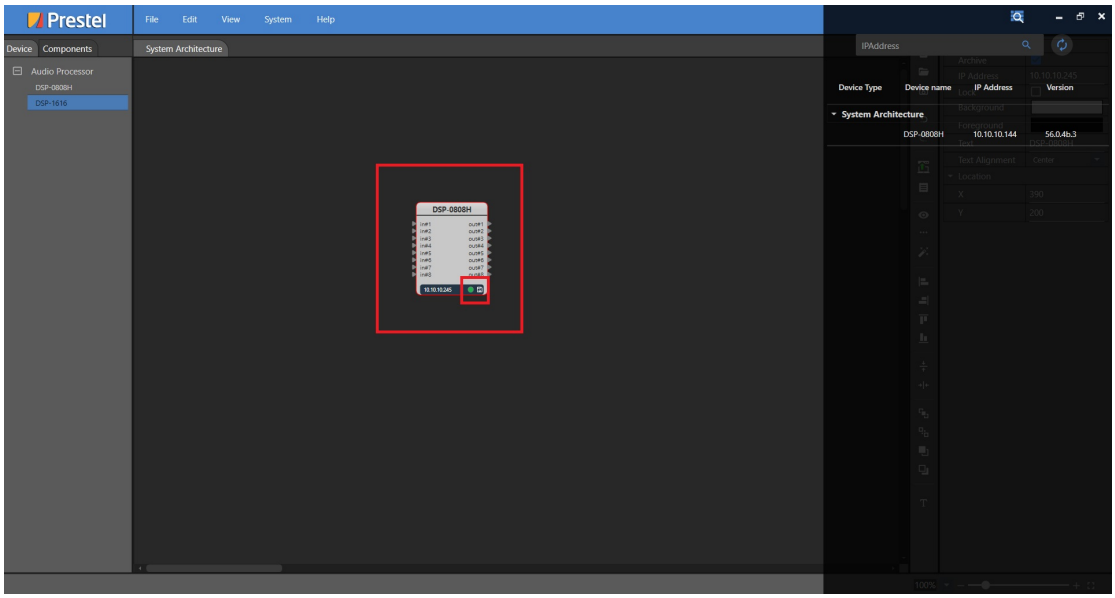
5.4.4 Download program

Users can view, control, or modify programs in devices discoverable by the current network, but they need to download the programs from the running device to the local software for these operations. To download a program, simply select the target device from the discovery bar on the right, hold down the left mouse button, and drag it to the "System Architecture" page in the middle area of the software, as shown in the figure below.



Note: The local computer must be on the same network segment as the target device to successfully download the program from the target device.

After the download is successful, the software will be in running mode. The target device module will appear in the main interface, and the status light on the device module will be green, as shown below:



Note: If the IP address of the target device has been modified, the downloaded program will still have the old IP address. After downloading the program, the status light under the device module on the main interface will be "gray," and the IP address displayed on the module will also be the old IP address (as shown in the figure below). If we need to control the device at this time, we need to exit the "Running Mode" first, then click the device module, modify the IP address in the property column of the device module to the actual IP address of the current device hardware, and upload the program again.

5.4.5 Save

After completing the program editing, you can perform the "save" operation. For a newly created program, you need to first select the local path where it will be saved.